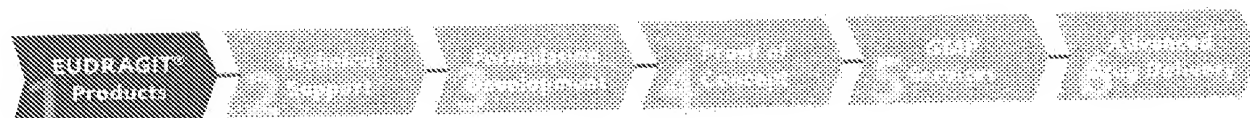
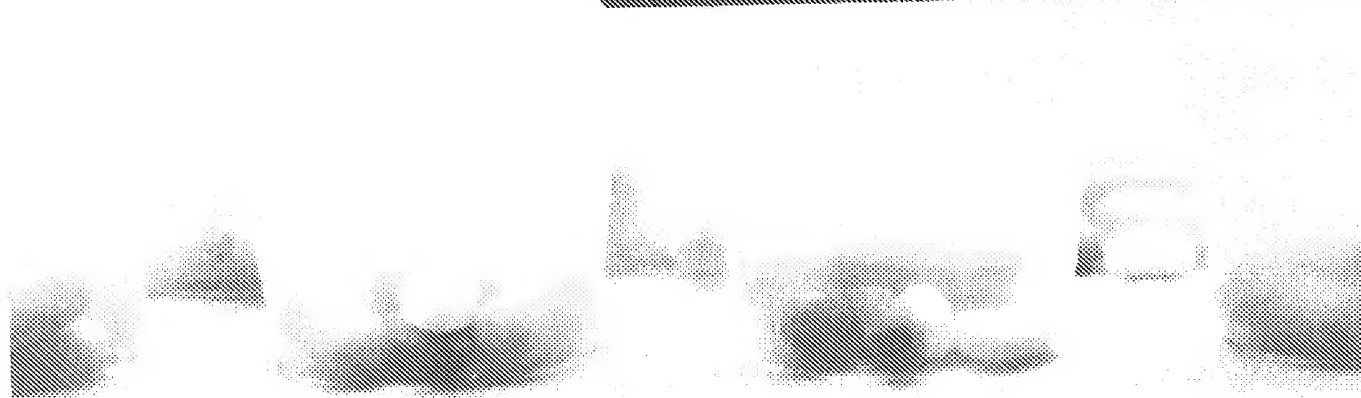


## EXHIBIT "A"

# EUDRAGIT®

Acrylic Polymers for Solid  
Oral Dosage Forms



When it comes to targeted drug release profiles, EUDRAGIT® is the pharmaceutical industry's preferred choice of product. The range of EUDRAGIT® Poly(meth)acrylate-based products provides full flexibility for your solid oral dosage forms.

EUORA<sup>®</sup> AGT<sup>®</sup> Polymers -  
Pharmaceutical Properties

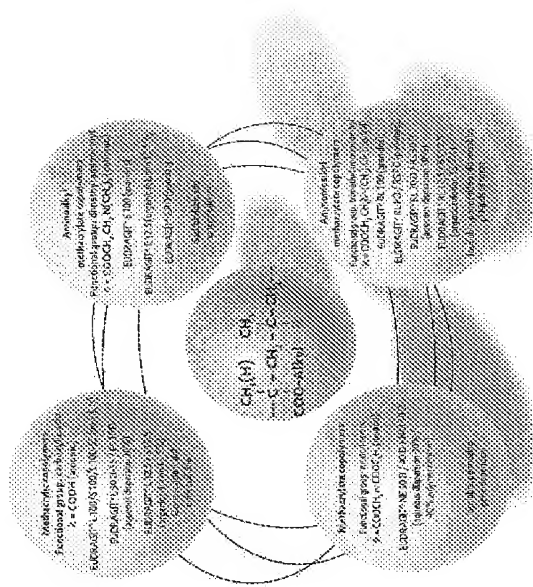
The basis of our offerings are our Polygmethacrylates for pharmaceutical applications, which are known worldwide in the industry under the trade name eLUGRAC<sup>TM</sup>. These polymers allow the active ingredients to become form to perform masking to increase patient compliance. The range of our product portfolio provides full flexibility for your targeted drug release profiles by offering best performance for enteric, protracted or sustained-release properties.

During the passage of the human body. The flexibility to combine the different polymers enables you to achieve the desired drug release profile by releasing the drug at the right place and at the right time and, if necessary, over a desired period of time. Other important functions are protection from external influences (moisture, oxygen, etc.), solution of granules and powders, and the possibility to combine polymers derived from esters of acrylic and methacrylic acid, whose physico-chemical properties are determined by functional groups (e.g., ELURAGIT<sup>®</sup> polymers are available in a wide range of different physical forms (aqueous dispersion, or granic solution, granules and powders),

**4. Disposition is made dependent**  
 1. Poly(meth)acrylates: soluble in digestive fluids by salt formation EUDRAGIT<sup>®</sup> L, S, FS and E polymers with acidic or alkaline groups enable pH-dependent release of the active ingredient.  
**Applications:** from simple taste masking through gastric resistance to controlled drug release in all sections of the intestine.

Z. Poly(meth)acrylates, insoluble but permeable in digestive fluids EUDRACIT® RL and RS polymers with alkaline and EUDRACIT® NE polymers with neutral groups enable controlled time release of the active ingredient by pH-independent swelling.

### Applications delayed and sustained drug release



## EUDRAGIT® offers valuable advantages for your enteric coatings:

- pH-dependent drug release
- Protection of actives sensitive to gastric fluid
- Protection of gastric mucosa from aggressive actives
- Increase in drug effectiveness
- Good storage stability
- GI and colon targeting

## Gastroresistance and GI Targeting

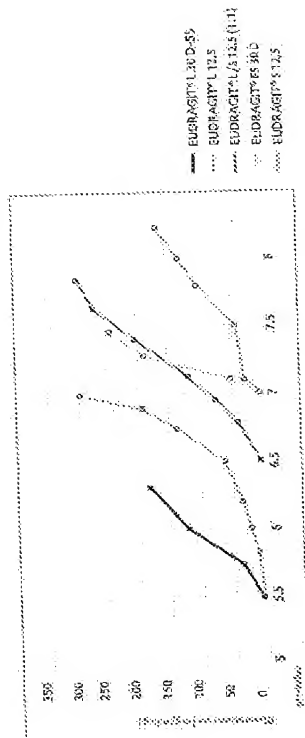
If you need to protect your active from the gastric fluid and would like to improve drug effectiveness — EUDRAGIT® L and S polymers are your preferred choice of coating polymers. They enable targeting specific areas of the intestine. Pharma Polymers offers a broad product portfolio of enteric EUDRAGIT® grades which dissolve at rising pH values. In addition, the different grades can be combined with each other, making it possible to adjust the dissolution pH, and thus to achieve the required GI targeting for the drug.

| EUDRAGIT® Polymer | Formulation                | Dissolution properties   |
|-------------------|----------------------------|--------------------------|
| L30D-55           | 70-85 % aqueous dispersion | Dissolution above pH 5.5 |
| L100-55           | Powder                     | Dissolution above pH 5.5 |
| L100              | Powder                     | Dissolution above pH 6.0 |
| L12.5             | 12.5 % Organic Solution    | Dissolution above pH 6.0 |
| S100              | Powder                     | Dissolution above pH 7.0 |
| S12.5             | 12.5 % Organic Solution    | Dissolution above pH 7.0 |
| FS31D             | 30 % Aqueous Dispersion    | Dissolution above pH 7.0 |

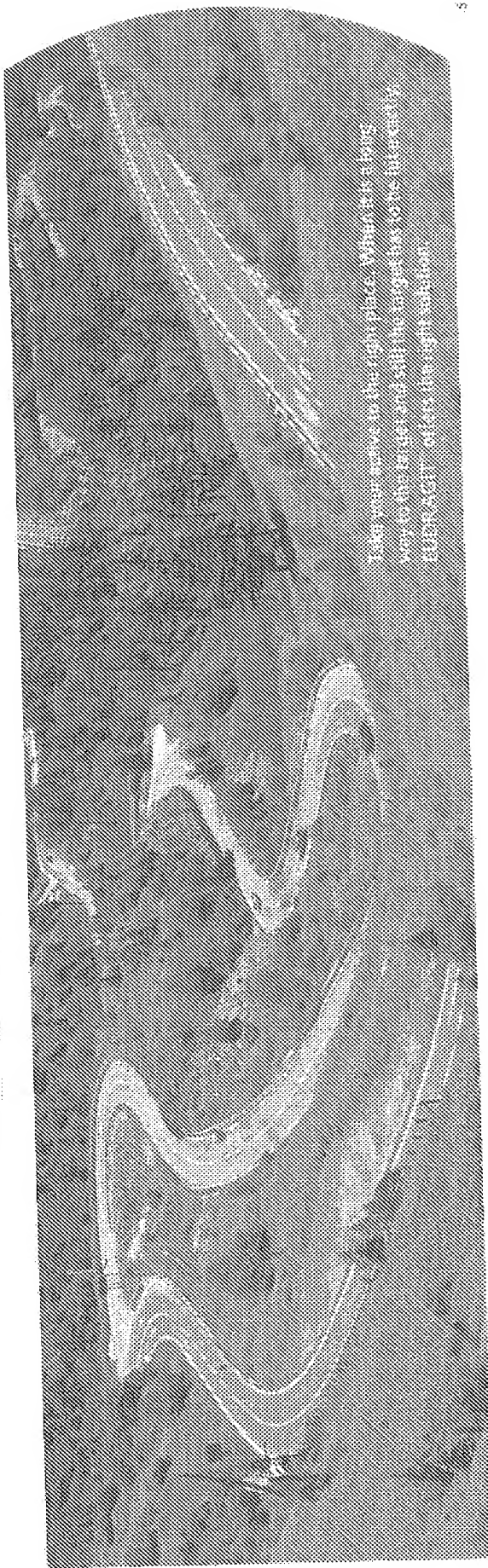


Targeted drug release in the colon is required for local treatment of intestinal disorders such as Crohn's disease, ulcerative colitis or intestinal cancer. It is also required for drugs that are poorly soluble in the upper gastrointestinal tract. Moreover, the gastroresistance of the coating ensures that the oral dosage form is patient compliant. The preferred coating is EUDRAGIT® FS 30 D, which combines release in the colon with the following technical advantages:

- aqueous processing
- highly flexible coatings
- suitable for multiparticulate tablet preparation



Take your active to the right place. When it's a long way to the target and still the target has to be reached, EUDRAGIT® offers the right solution.

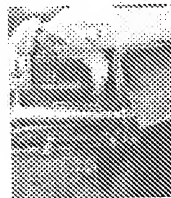


## Moisture Protection and Odor/Taste Masking

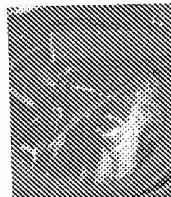
Do you need to protect your active from moisture or light and increase patient compliance by masking tastes and odors?

EUDRAGIT® E polymers help you seal sensitive actives and increase patient compliance by masking tastes and odors. Even thin layers of EUDRAGIT® provide the desired effect, making it an extremely economical application. Plasma Polymers offer various cationic EUDRAGIT® E grades for protective coatings.

| EUDRAGIT® Polymer | Available               | Excipient Properties                  |
|-------------------|-------------------------|---------------------------------------|
| E 100             | Granules                | Soluble in generic fluid up to pH 5.0 |
| E 12.5            | 12.5 % Organic Solution | Suspensible per model above pH 5.0    |
| E 90              | Powder                  |                                       |



Our protective polymers are suitable for aqueous or organic coatings and can be applied in a



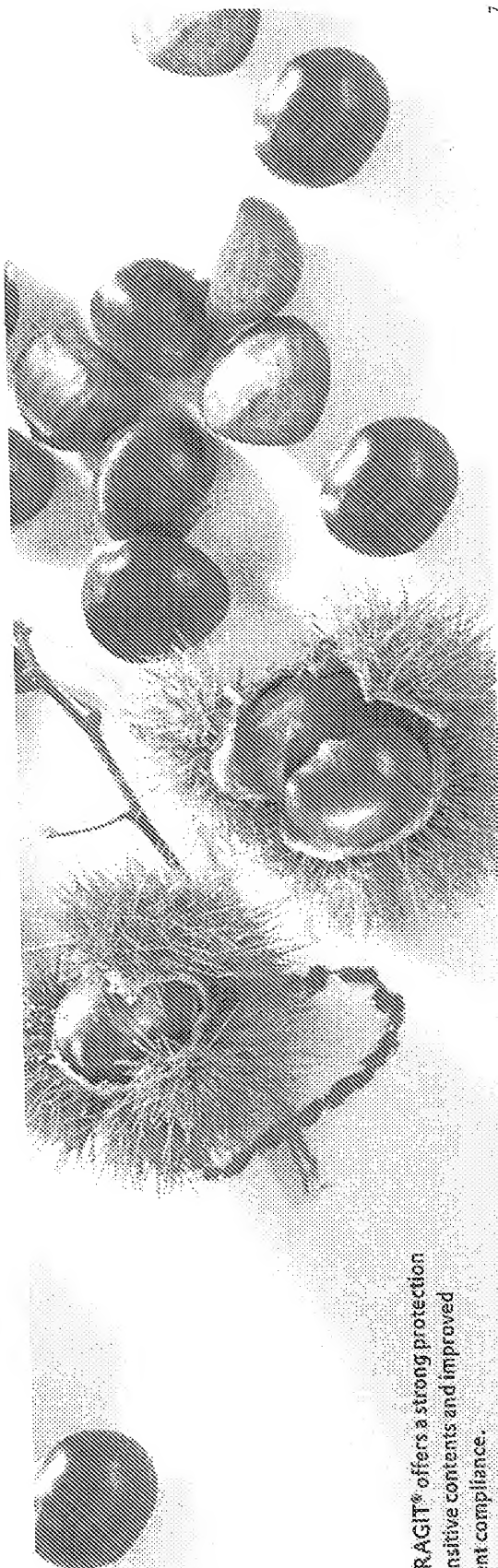
mill extrusion process. During the melt extrusion process the cationic EUDRAGIT® E polymer



interacts with the anionic active which provides excellent taste masking properties.

## Take advantage of protective EUDRAGIT® coatings:

- pH-dependent drug release
- Protection of sensitive actives
- Taste and odor masking
- Moisture protection
- Economical application
- Improved passage of the dosage form
- Smooth and glossy surfaces, good color coating



EUDRAGIT® offers a strong protection of sensitive contents and improved patient compliance.

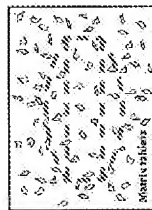
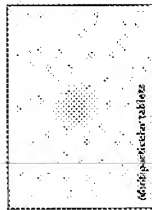
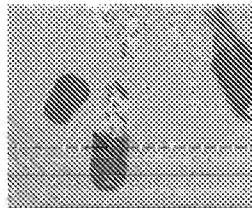


## Time-Controlled Drug Release

Whether you need your drug to release over a specific period of time or would like to benefit from the advantages of multiparticulate or matrix formulations — EUDRAGIT® can help you achieve your desired release profile. Drug delivery can be controlled throughout the entire gastrointestinal tract to increase the therapeutic effect and patient compliance. Different polymer combinations of EUDRAGIT® RL and RS grades allow custom tailored release profiles to achieve the desired drug delivery performance. EUDRAGIT® NE and NM grades are neutral ester dispersions which do not require addition of plasticizer.

| EUDRAGIT® Grades | Availability            | Swelling Properties   |
|------------------|-------------------------|---|
| RL 100           | Granules                | Insoluble<br>High permeability<br>pH-independent swelling   |
| RL 10            | Powder                  |   |
| RL 10 D          | 30 % Aqueous Dispersion |   |
| RL 12.5          | 12.5 % Organic Solution | Insoluble<br>Low permeability<br>pH-independent swelling  |
| RS 100           | Granules                |   |
| RS 10            | Powder                  |   |
| RS 10 D          | 30 % Aqueous Dispersion | Insoluble, low permeability<br>pH-independent swelling<br>No plasticizers required<br>Highly flexible |
| RS 12.5          | 12.5 % Organic Solution |   |
| NE 10 D          | 30 % Aqueous Dispersion |   |
| NE 40 D          | 40 % Aqueous Dispersion |   |
| NM 30 D          | 30 % Aqueous Dispersion |   |

Three size tool  
formulation options:

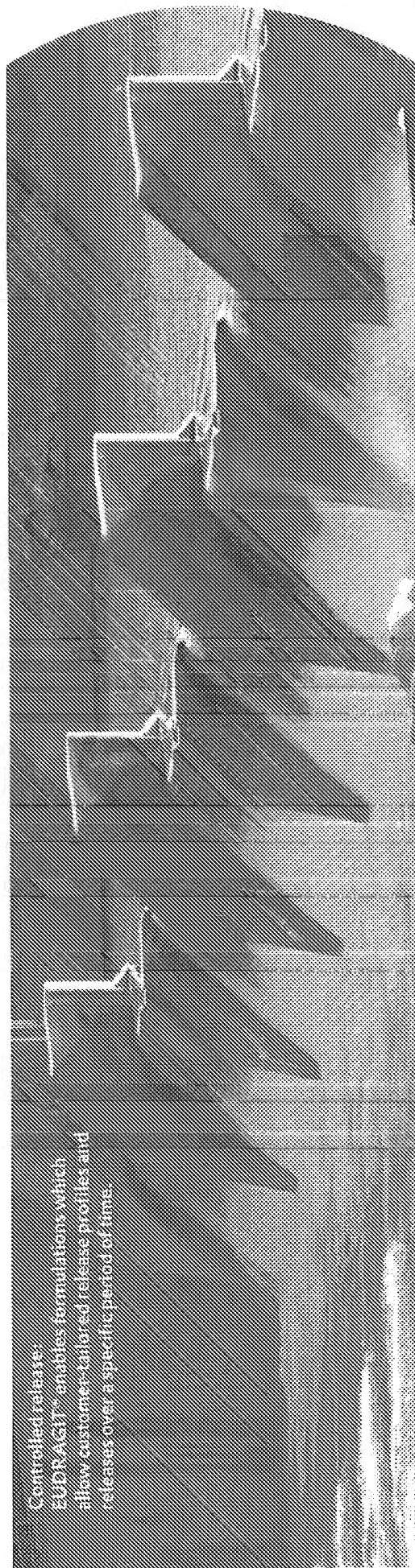


EUDRAGIT® is employed as a coating material, usually for the coating of pellets or particles that are filled into capsules or compressed into tablets. These pellets or particles act as diffusion cells in the digestive tract and release a constant drug quantity per unit of time (multi-unit dosage form).

### Benefit from EUDRAGIT® coatings with sustained release:

- Time-controlled release of active ingredients
- Therapeutically customized release profiles
- Higher patient compliance due to reduced number of doses to be taken
- Cost-effective processing

Controlled release:  
EUDRAGIT® enables formulations which allow customer-tailored release profiles and releases over a specific period of time.



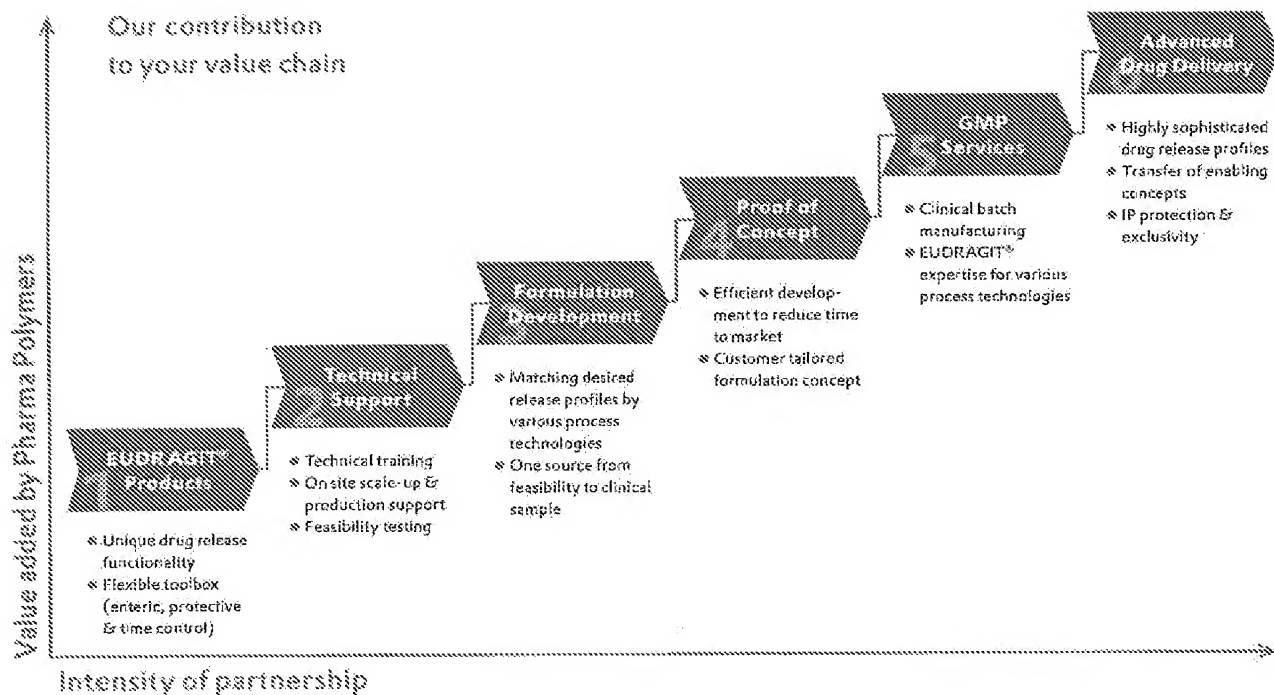
## Market Strength by means of Strategic Partnership

Pharma Polymers, a business line of Evonik Industries, offers the complete line of EUDRAGIT® products and related services along the value chain of our customers. For over 50 years we have proven our reliability as a quality partner to the pharmaceutical industry. Our state of the art services cover various stages of the development processes, including

- ◆ advanced technical support
- ◆ formulation development
- ◆ proof of concept
- ◆ GMP services.

Our customers see us as a strategic partner for their developments of solid oral dosage forms with a targeted drug release profile. By using our value adding business model our customers get:

- ◆ increased efficiency in their R&D and manufacturing processes
- ◆ new drug delivery technologies
- ◆ reduction of the time to market for their developments
- ◆ professional management of their product's life cycle

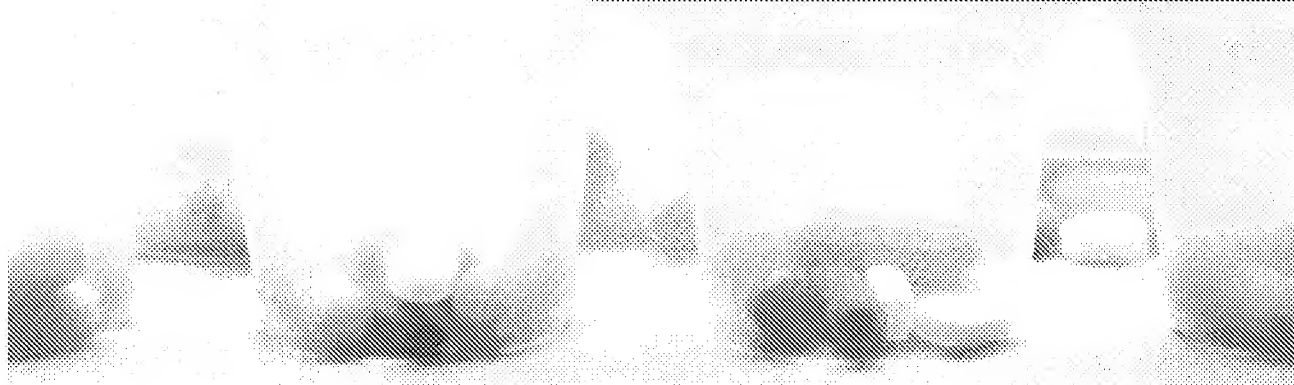




**EVONIK**  
INDUSTRIES

# EUDRAGIT®

at a glance



**EUDRAGIT®**  
Products

**2** Technical  
Support

**3** Formulation  
Development

**4** Proof of  
Concept

**5** GMP  
Services

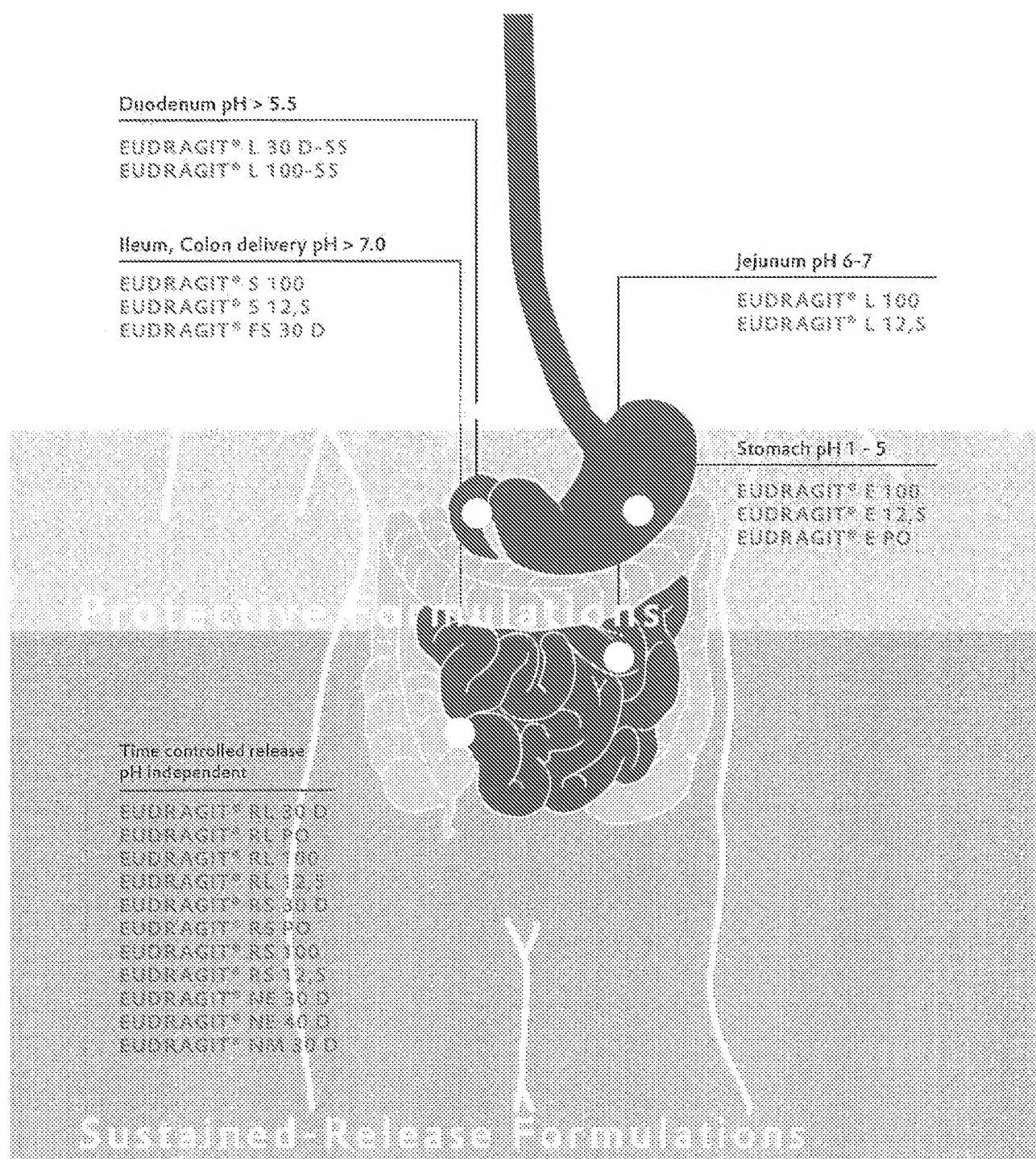
**6** Advanced  
Drug Delivery

Evonik. Power to create.



# EUDRAGIT®

## Versatile Polymers for Oral Solid Dosage Formulations





## Delivery and Packaging

|                     | Grade               | Unit (kg, net)      | Packaging   | Storage   | Flash Point        |
|---------------------|---------------------|---------------------|---|---|--------------------|
| Aqueous Dispersions | EUDRAGIT® L 30 D-SS | 5, 30, 200*, 1000** |   |   |                    |
|                     | EUDRAGIT® NE 30 D   | 5, 30, 600**        |   |   |                    |
|                     | EUDRAGIT® NE 40 D   |                     | Polyethylene canister   | Protect from freezing.<br>Store at controlled room temperature.   |                    |
|                     | EUDRAGIT® NM 30 D   |                     | Polyethylene drum*  |   | Not flammable      |
|                     | EUDRAGIT® RS 30 D   | 5, 30               | Polyethylene container**                                      |   |                    |
|                     | EUDRAGIT® RL 30 D   |                     |   | Protect from freezing and do not store above 25 °C (77 °F).   |                    |
|                     | EUDRAGIT® FS 30 D   |                     |   | Protect from freezing. Store between +5 °C and +10 °C (41 °F and 50 °F).  |                    |
| Solid Substances    | EUDRAGIT® L 100     |                     |   |   |                    |
|                     | EUDRAGIT® L 100-SS  |                     |   |   |                    |
|                     | EUDRAGIT® S 100     | 5, 20               |   |   |                    |
|                     | EUDRAGIT® RS 100    |                     | PP box with polyethylene inner bag                            | Store at controlled room temperature.<br>Protect against moisture.  |                    |
|                     | EUDRAGIT® RL 100    |                     |   |   | Not flammable      |
|                     | EUDRAGIT® RS PO     |                     |   |   |                    |
|                     | EUDRAGIT® RL PO     |                     |   |   |                    |
|                     | EUDRAGIT® E 100     |                     |   | Protect from warm temperatures.<br>Protect against moisture.  |                    |
| Organic Solutions   | EUDRAGIT® E 100     | 10                  |   | Store at temperatures up to 25 °C (77 °F). Protect against moisture.  |                    |
|                     | EUDRAGIT® E 12,5    |                     |   |   | -15 °C (5 °F)      |
|                     | EUDRAGIT® L 12,5    | 4, 20, 150          |   | Protect from warm temperatures.<br>Store in tightly closed containers.  |                    |
|                     | EUDRAGIT® S 12,5    |                     | Steel drum with exterior lacquer coat and polyethylene lining | Protect from warm temperatures.<br>Store in tightly closed containers.<br>Do not store at temperatures below 10 °C (50 °F). | -13.5 °C (56.3 °F) |
|                     | EUDRAGIT® RS 12,5   | 4, 20               |   | Protect from warm temperatures.<br>Store in tightly closed containers.  | -15 °C (5 °F)      |
|                     | EUDRAGIT® RL 12,5   |                     |   |   |                    |

**Stability:** Minimum stability dates are stated on the product labels and batch related certificates of analysis. Storage stability data is available upon request.

Further information is available  
from the following addresses:

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Evonik Röhm GmbH is the owner of patent rights covering the use of EUDRAGIT® polymers in compositions, procedures and/or applications which may be subject to license agreements. Compositions, procedures and/or applications falling within the claims of patents related to EUDRACOL® and EUDRAPULSE® and EUDRAMODE® will always require separate license agreements.

® = registered trademark

EUDRAGIT® = reg. Trademark of Evonik Röhm GmbH, Darmstadt, Germany



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